

## Claims

5        1. A filter and blower unit for breathing masks or bonnets with a breathing air filter that is driven by a direct current motor and designed for use in potentially explosive areas, characterized in that the direct current motor comprises a fixed stator coil module (1) and a magnetic rotor (12) rotating around the peripheral surface of said stator coil module (1), in that the coils (5) located at the stator coil module (1) and their electric terminals are embedded in a non-conductive casting compound (6), in that a motor control module (8) and a voltage converter module are located upstream of the stator coil module (1) for power input via shielded electric lines (7) that are also embedded in a non-conductive casting compound (6), and in that the required power is supplied at a current to voltage ratio at which the voltage does not exceed the value required for intrinsic safety.

10        2. The filter and blower unit according to claim 1, characterized in that the magnetic rotor (12) comprises a shaft (13) centered in a pot-type case (11) that is pivoted in a bearing shell (3) formed in the center of the stator coil module as well as magnets (12a) attached peripherally to its inner surface, and blades (14) attached peripherally to its outer surface.

15        3. The filter and blower unit according to claim 1, characterized in that the stator coil module (1), the motor control module (8) and the voltage converter module (9) are located on a base circuit board (10)

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on which the electric connecting lines (7) run internally or are embedded in a casting compound.

5      4. The filter and blower unit according to claim 1, characterized in that power is supplied from an intrinsically safe accumulator or battery pack (15).